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MONTANA

DIABETES PROJECT

Montana Diabetes Control Plan 1997-1999

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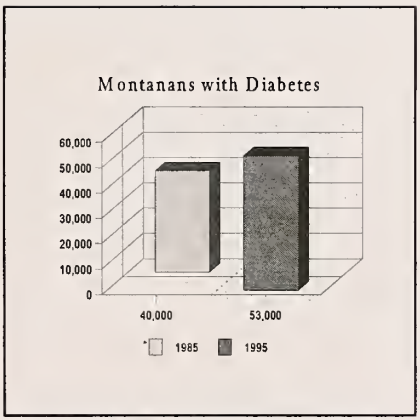
Background

The Problem: **Diabetes is common, serious and costly. It poses a major public health problem in Montana.**

Health Effects

Diabetes is a common disease in Montana.

The number of Montanans with diabetes has risen from 40,000 in 1985 to 53,000 in 1995. Still, it is estimated that only half of those who have diabetes know they have it.[1]



Source: Diabetes in America, National Institutes of Health, 1995; NPA Data Services, Inc., 1996 Intercensal Estimates.

An additional 197,177 Montanans may be at increased risk for undiagnosed diabetes. This is due to the risk factors of age, obesity and sedentary lifestyle.[2]

Populations most affected by diabetes in Montana include those ages 65 and older and Native Americans.[3]

Diabetes is a serious disease in Montana.

Death

Each year diabetes contributes to the death of about 500 Montanans.[4]

Diabetes is the seventh leading cause of death among all Montanans, and the fourth leading cause of death among Native American Montanans.[5]

DIABETES RANK AS CAUSE OF DEATH - ALL CAUSES				
ALL RACES			NATIVE AMERICANS	
Rank	Cause of Death		Rank	Cause of Death
1	Heart disease		1	Heart disease
2	Cancer		2	Cancer
3	Cerebrovascular disease		3	Accidents
4	Chronic obstructive pulmonary disease		**4**	**Diabetes mellitus**
5	Accidents		5	Cerebrovascular disease
6	Pneumonia and influenza		6	Chronic liver disease and cirrhosis
7	**Diabetes mellitus**		7	Pneumonia and influenza

Source: Montana Vital Records, Department of Public Health and Human Services, 1991-1995.

Disability

Approximately 14,371 Montanans with diabetes suffer from a long-term reduction in activity due to diabetes.[6]

Diabetes is the cause of about 7,504 hospitalizations annually.[7]

Complications

Many people with diabetes suffer serious complications of the disease.

Cardiovascular disease

People with diabetes are two to four times more likely to develop heart disease and five times more likely to have a stroke than the general population.[8]

Nearly 2,300 hospitalizations annually are for cardiovascular disease in Montanans with diabetes.[9]

Poor pregnancy outcomes

Diabetes contributes to adverse outcomes of pregnancy and can increase the risk of birth defects. Diabetes poses a medical risk during pregnancy that is increasing among Native American women in Montana.[10]

Eye Disease

Diabetic eye disease is the leading cause of new blindness among adults. In Montana, there are an estimated 41 new cases of blindness due to diabetes each year, and many more Montanans have impaired vision due to diabetes.[11]

Nerve Damage

Diabetes causes nerve damage which can lead to leg and foot amputations. In Montana, there are an estimated 151 lower extremity amputations due to diabetes each year.[12]

Kidney Disease

Ten percent of all people with diabetes develop kidney disease and diabetes accounts for 32 percent of all renal failure. Each year, there are an estimated 63 new cases of end-stage renal disease due to diabetes in Montana. As of June 30, 1996, there were 188 Montanans with diabetes on dialysis. Of these, 126 reported their race as White; 60 as Native American; and two as "other."[13]

ANNUAL ESTIMATED HOSPITALIZATIONS RELATED TO DIABETES	
Hospitalizations	7504
Cardiovascular hospitalizations	2300
ANNUAL ESTIMATED COMPLICATIONS OF DIABETES	
New cases of blindness	41
Lower extremity amputations	151
New cases of end stage renal disease	63

Source: The Burden of Diabetes in Montana, Centers for Disease Control and Prevention, 1996.

Economic Costs

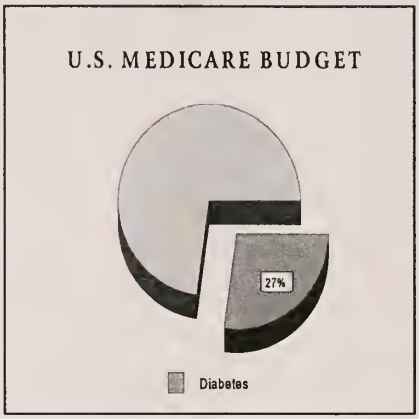
Diabetes is a costly disease in Montana.

The cost of diabetes in Montana is staggering. The direct costs (medical care) and indirect costs (lost productivity and premature mortality) are estimated at $336 million annually. This comes to about $13,000 per person with diagnosed diabetes.[14]

One in seven health care dollars is spent on diabetes care in the United States.[15]

Diabetes accounts for 27% of this country's entire Medicare budget.[16]

Persons with diabetes are the largest users of health care dollars in the Indian Health Service (IHS).[17]



Source: "The Economic Bottom Line on Preventive Diabetes Care," Claresa Levetan, MD and Robert Ratner, MD; Practical Diabetology, December 1995.

The Challenge: Overcoming the lack of information and understanding about diabetes in Montana.

According to a recent needs assessment conducted by Montana State University (MSU), Billings and University of Montana (UM), Missoula, for the Montana Diabetes Project:

- Of seven major diseases, diabetes is viewed by Montanans as the least serious.

- Montanans are less likely to seek medical attention for the signs and symptoms of diabetes than they are for other major diseases.
- Montana primary care providers need updated information on the diagnosis, treatment and management of diabetes.
- Montanans with diabetes need more information on the latest in treatment and self-management of the disease.
- Cost savings and reduced morbidity associated with preventive care and self-care of diabetes are not widely understood.
- Providers, educators and persons with diabetes and their families need information and resources to deal with the psychosocial aspects of living with diabetes.

The American Diabetes Association (ADA) ranks Montana 38th out of the 50 states and District of Columbia in access to resources for persons with diabetes. Five areas were examined in an ADA study: policy, financing, services, providers and facilities.

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Recommendations

The Solution: Enhanced public, professional and patient education about diabetes.

The Centers for Disease Control and Prevention (CDC) has funded a state-based diabetes project within the Department of Public Health and Human Services (DPHHS) through June 30, 1999. The Montana Diabetes Project represents an opportunity to develop a population-based, public health approach to diabetes prevention and control. Year 2000 National Health Objectives the CDC has targeted for these programs include the following:

- increase years of healthy life for people with diabetes (Objective 17.1)
- reduce diabetes-related deaths (Objective 17.9)
- reduce the most severe complications of diabetes (Objective 17.10)
- reduce the incidence and prevalence of diabetes (Objective 17.11).
- increase the proportion of people with diabetes who receive formal patient education (Objective 17.14a).

The CDC has directed states to undertake activities in three general categories:

1. Defining and monitoring the burden of diabetes in Montana through state-based surveillance activities which focus on diabetes as a public health problem.
2. Developing and implementing new approaches to reduce the burden of diabetes. The CDC emphasizes three approaches: health systems; community-based; and health communications.
3. Coordinating existing resources and efforts to reduce the burden of diabetes.

In April 1995 the Montana Diabetes Project convened a statewide coalition of public and private partners for diabetes prevention and care. The Advisory Coalition has donated time and expertise to a variety of project activities. As directed in Montana's original application to CDC, the emphasis of its work to date

has necessarily focused on defining and monitoring the burden of diabetes in Montana.

The group provided advice on the design and implementation of a statewide diabetes needs assessment. Assessment activities included analysis of Behavioral Risk Factor Surveillance System data; birth and death record information; data collected from a series of focus groups with people who have diabetes, family members of people with diabetes and a variety of health care providers; a survey of physicians; and a survey of public health nurses. Key assessment findings were noted previously under "The Problem" in this plan.

Based on results of the needs assessment, the Advisory Coalition strongly believes that reducing the burden of diabetes in Montana requires a comprehensive effort--an effort that places considerable emphasis on enhanced public awareness, and patient and professional education using CDC's priority approaches: health systems; community-based; and health communications.

Public awareness and education

A key to cutting costs and eliminating disability associated with diabetes in Montana lies in early diagnosis and treatment. Raising public awareness with targeted messages about the seriousness of diabetes and risk factors for diabetes is essential to ensuring persons with undiagnosed diabetes access care and avoid long-term, costly complications. In addition, there is increasing evidence that weight control, modest physical activity and healthy eating can prevent or delay the development of non-insulin dependent diabetes mellitus. Education in this area has potential to impact not only diabetes, but a number of other chronic diseases suffered by thousands of Montanans.

Policy development, advocacy efforts and funding for diabetes prevention and control can only be advanced if the serious burden of diabetes in Montana is recognized. Public awareness emphasizing the burden and the potential for cost savings with proper management and treatment of this disease must be increased.

Patient and professional education

While early detection and treatment are key to long-term reductions in the health consequences of diabetes, proper treatment and self-management of the disease are

also critical to preventing complications and their associated costs. Firm scientific data have recently confirmed that complications can be significantly reduced by improved diabetes control. Studies such as the Diabetes Control and Complications Trial, a large multi-center randomized controlled trial of intensive therapy for Type I diabetes, showed that up to 76% of retinopathy can be prevented, and up to 54% of nephropathy can be prevented or its onset delayed through tight glucose control and close follow-up.[18] However, barriers continue to exist for patients and providers, and within the health care system which adversely affect diabetes self-care and medical care.

Health care providers and people with diagnosed diabetes in Montana need additional education on the latest in treatment, care and self-management of diabetes. The approach that will reach the largest number of people with diabetes and have the greatest impact on reducing costs involves working with health care systems to adopt state-of-the-art diabetes education and treatment practices. Education on the psychosocial aspects of the disease must be integrated into this effort to maximize its effectiveness.

Advisory Coalition Recommendations

What follows are the specific recommendations of the Montana Diabetes Project Advisory Coalition, outlining priorities to be pursued during federal fiscal years 1998-99 (July 1, 1997 - June 30, 1999). These recommendations will serve as guidance for the Project in preparing specific workplans to be submitted to CDC for funding for the next two fiscal years.

While these recommendations are presented within the framework of the CDC's priority activity areas, implementation of these recommendations is aimed at the solution: enhanced public, professional and patient education.

Objective: To define, monitor and disseminate information about the burden of diabetes in Montana. State-based surveillance activities will be used, which focus on diabetes as a public health problem.

1. Continue inclusion of diabetes module in Montana's Behavior Risk Factor Surveillance System (BRFSS).

2. Continue work with Montana-Wyoming Foundation for Medical Care and Health Care Financing Administration (HCFA) to describe the population 65+ with diabetes using Medicare paid claims data. This effort is aimed at identifying opportunities to improve care for and the health status of persons with diabetes.

3. Participate in the Montana-Wyoming Diabetes Data Collaboration. Montana-Wyoming Foundation for Medical Care has taken the lead in this effort to analyze diabetes-related Medicaid, Medicare, Blue Cross and Blue Shield, and IHS paid claims data. The effort is designed to better understand diabetes in Montana, and to identify opportunities to improve care for and the health status of persons with diabetes.

Objective: To develop and implement new approaches to reduce the burden of diabetes in Montana. Activities are listed according to CDC's priority approaches: health systems; community-based; and health communications.

Health Systems Approaches

1. Continue/expand projects aimed at improving the health status of Medicare beneficiaries with diabetes in collaboration with Montana-Wyoming Foundation for Medical Care and HCFA. To date these have included an intervention to increase the rate of annual eye exams and another to increase knowledge of and levels of physical activity in this population. Future projects will be developed based on evaluation of these pilots and may include additional efforts directed toward Medicare beneficiaries or efforts aimed at educating health care providers. Key areas of prevention such as foot care, use of glycosylated hemoglobin and other accepted standards of care can be future areas of focus.

2. Pursue collaborative efforts with managed care organizations (MCOs), aimed at ensuring application of accepted standards, policies and protocols to reduce the burden of diabetes. Activities may include development and implementation of population-based standards of care, institution of reminders to persons with diabetes within a plan to receive certain preventive services, public awareness efforts or screenings. While

managed care is only beginning to penetrate Montana, it is important to continue to pursue relationships with these organizations which can ensure access to appropriate care for persons with diabetes.

3. Pursue projects with Medicaid similar to those described above, such as reminders to persons with diabetes to receive certain preventive services, participation in diabetes-related focused clinical studies or implementation of certain standards of care. It is important to note that Medicaid is also moving to managed care, but at this time has only a small percentage of recipients enrolled. This may provide an initial opportunity to become involved with a MCO.

Community-Based Approaches

4. Continue/expand CDC's "Diabetes Today" model to additional Native American communities. "Diabetes Today" is a community-based approach to assessment and prioritization of diabetes-related problems and needs; and implementation of diabetes prevention and control activities. Due to the increasing rate of gestational diabetes in this population, it is important to encourage Native American communities to consider activities targeting prevention to women of childbearing age. "Diabetes Today" is currently being piloted on the Northern Cheyenne Indian Reservation. Missoula's urban Indian community will implement "Diabetes Today" starting in February 1997.

5. Develop and implement a quality diabetes education initiative in conjunction with the Montana Chapter of the American Association of Diabetes Educators (MAADE), American Diabetes Association, Montana Affiliate and American Dietetic Association. This initiative will: provide diabetes education to all types of health professionals using curriculum developed by the American Association of Diabetes Educators; mentor diabetes educators interested in becoming certified diabetes educators (CDEs); assist hospitals in developing diabetes education programs approved for reimbursement by Medicare and Medicaid; and assist hospitals interested in developing ADA-recognized diabetes education programs.

Health Communications

6. Continue patient and professional diabetes education seminars in collaboration with ADA, IHS, MAADE, and UM School of Pharmacy.

7. Implement targeted public awareness activities. For consideration are activities directed toward senior citizens and Native Americans, Montana populations most heavily impacted by diabetes. Montana's 175 senior nutrition sites, Area Agencies on Aging and the DPHHS Senior and Long-Term Care Division can serve as an established network to reach the senior population. Diabetes Today sites provide an avenue for public awareness activities directed toward Native American populations. Montana Diabetes Project has a contractual arrangement with a marketing firm in an effort to assure awareness activities impact intended audiences, have measurable results and to assist with materials development for health systems and community-based approaches.

Objective: To coordinate existing resources and efforts to reduce the burden of diabetes in Montana.

1. Maintain the Montana Diabetes Project Advisory Coalition with participation by key diabetes organizations and consumers in Montana.

2. Continue to establish and foster partnerships for diabetes prevention and care in order to maximize limited resources. To date, nearly every activity of the Montana Diabetes Project has involved working with other organizations. To name a few, these have included: Montana-Wyoming Foundation for Medical Care; Blue Cross and Blue Shield of Montana; ADA; MAADE; IHS; UM School of Pharmacy; and public and private health care providers.

3. Support activities of other organizations involved in diabetes control. For example, the UM School of Pharmacy is embarking on a diabetes certification program for Montana pharmacists. MSU School of Nursing and AADE are developing a computer-assisted "Women-to-Women" diabetes

support network. While not directly responsible for these activities, the Project can provide support by encouraging participation and publicizing them when possible.

Summary of Accomplishments

Completion of Statewide Diabetes Needs Assessment

The Montana Diabetes Project worked with sociologists from MSU, Billings and UM, Missoula, to complete a statewide diabetes needs assessment. Components of the assessment included analysis of Behavioral Risk Factor Surveillance System (BRFSS) data; birth and death record information; data collected from a series of focus groups with people who have diabetes, family members of people with diabetes and a variety of health care providers; a survey of physicians; and a survey of public health nurses. Results were prioritized by the Advisory Coalition as part of this planning effort.

Medicare Demonstration Projects

In collaboration with Montana-Wyoming Foundation for Medical Care and HCFA, the Montana Diabetes Project has undertaken two activities aimed at improving the health status of Medicare beneficiaries with diabetes: one to increase the rate of annual eye exams and the other, levels of physical activity in this population. Estimates from Medicare billing data show that less than 40% of beneficiaries with diabetes receive annual retinal exams. According to the 1994 BRFSS, 38% of Montanans aged 65 years and older have a sedentary lifestyle. Since direct mail intervention has proven successful in increasing influenza immunization rates in this population, direct mail interventions were used in both projects. Preliminary data analysis indicates these efforts have had a positive impact. Detailed outcome measures will be available in early 1997.

Diabetes Today

"Diabetes Today," a community mobilization approach to diabetes prevention and control developed by the CDC, has been implemented on the Northern Cheyenne Indian Reservation. To date, community members including health care workers, have planned a lecture series/support group, as well as a healthy cookbook containing modified Native recipes and locally available foods. "Diabetes Today" will begin in Missoula with the urban Indian population in February.

Patient and Professional Seminars

Montana Diabetes Project, in conjunction with the ADA, MAADE, IHS and UM School of Pharmacy held two diabetes education seminars in May 1996 at Fairmont Hot Springs, Anaconda. A two-day professional education seminar was attended by Montana physicians, nurses, dietitians and pharmacists. A one-day patient

education seminar was provided for people with diabetes and their family members. Patient and professional seminars are planned for Whitefish in May.

Community Pharmacy Education Project

The Montana Diabetes Project in conjunction with the UM School of Pharmacy, submitted a proposal to Novo Nordisk Pharmaceutical Company, to pilot a diabetes education program in a community pharmacy setting. The proposal was successful and funded a UM pharmacy student intern, to implement the program at Western Drug in Havre. The funding allowed the student to develop a series of brief diabetes education modules for use by pharmacists. The modules were taught to people with diabetes in this community pharmacy setting over a three month period. Pre- and post-testing indicated a significant gain in patient knowledge using this approach.

Materials developed for the Havre project will be distributed widely to pharmacists across the state for use with patients. This is being done as part of a diabetes certification program sponsored by the School of Pharmacy, with assistance from the Montana Diabetes Project.

Public Awareness

Since its inception, approximately 350,000 written diabetes risk tests have been distributed by the Montana Diabetes Project in conjunction with ADA and Blue Cross and Blue Shield of Montana. Annually, during Diabetes Awareness Month (November) and Diabetes Alert (March) the Project has engaged in numerous public awareness activities using radio and television public services announcements, press releases, as well as more targeted approaches, such as mailings to health care providers and newsletter articles.

Diabetes Surveillance

Since January 1995, the Montana Diabetes Project has included a module of diabetes questions in the monthly BRFSS. The BRFSS is a telephone survey which consists of approximately 120 questions relating to the 20 leading causes of death. Results will allow the Project to monitor the prevalence of diabetes in Montana's adult population and to assess the extent to which certain clinical preventive services are being provided to this group. In addition, information on health behaviors of persons with diabetes can be determined.

Two reports have been produced by Montana Diabetes Project and the UM Center for Population Research, Missoula. BRFSS data from the years 1988-1994 were used to look at health behaviors related to diabetes and its complications. Vital

records from the years 1988-1994 were used to describe the burden of diabetes in terms of mortality and adverse outcomes of pregnancy.

Montana-Wyoming Foundation for Medical Care, Montana Diabetes Project, Blue Cross and Blue Shield of Montana, IHS and Montana Medicaid are working collaboratively on a study of diabetes-related medical claims in Montana. This project will increase knowledge about the prevalence of diabetes and the health care utilization of people with diabetes in the state. It will also aid in identification of potential opportunities to improve care for and the health status of Montanans with diabetes.

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